AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method of manufacturing a thin film comprising:

a first ~~low temperature highly~~ doped layer growing step of performing dopant doping while growing the thin film at a given first temperature;

an annealing step of interrupting the growth of the thin film and annealing the thin film at a given second temperature higher than said first temperature; and

a second ~~high temperature lowly~~ doped layer growing step of growing the thin film at said second temperature,

wherein said first temperature is about 300°C and said second temperature is about 800°C, and

a total duration of the first doped layer growing step and the second doped layer growing step is at least 100 seconds.

2. (Currently amended) The method according to Claim 1, wherein a given number of said first ~~low temperature highly~~ doped layer growing step, said annealing step and said second ~~high temperature lowly~~ doped layer growing step are repeated.

3. (Currently amended) A method of manufacturing a thin film comprising:

a ~~low temperature highly~~ doped layer growing step of performing dopant doping while growing the thin film at a given first temperature; and

an annealing step of interrupting the growth of the thin film and annealing the thin film at a given second temperature higher than said first temperature,

wherein said first temperature is about 300°C and said second temperature is about 800°C, and

a total duration of the doped layer growing step is at least 100 seconds.

4. (Currently amended) The method according to Claim 3, wherein a given number of said ~~low temperature highly~~ doped layer growing step and said annealing step are repeated.

5. (Original) The method according to any one of Claims 1 to 4, wherein a heat-treatment from said first temperature to said second temperature is performed by radiation of a laser beam.

6. (Currently amended) A method of manufacturing a p-type zinc oxide thin film comprising:

a first ~~low temperature highly~~ doped layer growing step of performing nitrogen doping while growing the zinc oxide thin film at a given first temperature;

an annealing step of interrupting the growth of the zinc oxide thin film and annealing the zinc oxide thin film at a given second temperature higher than said first temperature; and

a second ~~high temperature lowly~~ doped layer growing step of growing the zinc oxide thin film at said second temperature,

wherein a total duration of the first doped layer growing step and the second doped layer growing step is at least 100 seconds.

7. (Currently amended) The method according to Claim 6, wherein a given number of said first ~~low temperature highly~~ doped layer growing step, said annealing step and said second ~~high temperature lowly~~ doped layer growing step are repeated.

8. (Original) The method according to Claim 6 or 7, wherein said first temperature is about 300 °C and said second temperature is about 800 °C.

9. (Previously presented) The method according to any one of Claim 6 or 7, wherein a heat-treatment from said first temperature to said second temperature is performed by radiation of a laser beam.

10. (Withdrawn) A semiconductor device comprising the p-type zinc oxide thin film manufactured by the method according to any one of Claim 6 or 7.

11. (Withdrawn) The semiconductor device according to Claim 10, said device is a light emitting device.

12-20. (Canceled)

21. (Previously presented) The method according to Claim 8, wherein a heat-treatment from said first temperature to said second temperature is performed by radiation of a laser beam.

22. (Withdrawn) A semiconductor device comprising the p-type zinc oxide thin film manufactured by the method according to Claim 8.